

Off-Site Source Recovery Project

Progress Report -- Second Quarter FY 2003

Executive Summary

In the second quarter of FY 2003, Offsite Source Recovery Project activities included recovering 415 excess sealed sources. The FY 2003 project total is 1,334 sources recovered. The contractor has costed \$2,606K of a \$10,000K appropriation through direct labor, and has obligated an additional \$2,591K in purchase orders for multi-function containers required for sealed source recovery activities. Another \$1,370K is committed to on-site support work. Proactive plutonium-239 source recovery remains on hold, with one issue-resolving recommendation awaiting and approval at DOE Headquarters. LANL also must identify and arrange storage capability for plutonium-239 sources while they are in the LANL inventory.

Project Title: Off-site Source Recovery (OSR) Project
Headquarters Program: Office of Environmental Management (EM), EM-22
Work Authorization: Office of Nonproliferation and International Security, NA-241
B&R Code NN4001012
Field Element: National Nuclear Security Administration (NNSA) Service Center
(Albuquerque)
Site Operations : Los Alamos National Laboratory (LANL)

Background: This report covers the period January 1 - March 31, 2003. A September 19, 2002, NNSA work authorization provided the OSR Project with an additional \$10 million obligation in FY 2002 funding and a Statement of Work (SOW). The SOW addresses accelerating domestic excess sealed source recovery by the OSR Project at LANL.

Operational Activities: Since October 1, 2002, the OSR Project operations team has planned and conducted off-site operations for excess sources recoveries. Recoveries through March 31, 2003, include: (a) In the second quarter, the OSR Project recovered 415 sources containing americium-241 and plutonium-238; (b) A FY 2003 total of 1,334 excess sealed sources transferred to LANL for storage; and (c) A total of 16 sites recovered – 3 universities, 1 EPA Superfund Site, 2 hospitals, and 8 commercial firms.

Actual Costs: Project costs through the second quarter of FY 2003 total \$2,606K. An additional \$2,591K is committed to shipping container purchases. Approximately \$1,370K is committed to on-site support service work at LANL.

Management Activities: The additional funding is integrated with work funded through the EM Program. The project contractor, The University of California (UC), conducts most of the work at LANL. UC's completed Baseline Change Proposal (BCP) was submitted to DOE in January 2003. Concurrently, on-going field activities are addressing the accelerated recovery mission. UC is executing a cost plan to spend approximately \$8 million of the \$10 million in FY 2003 and \$2 million in FY 2004.

- 1) Procurements:** UC placed orders during the first quarter for all multi-function containers required during accelerated recovery activities. 242 S100 Pipe Overpack Assemblies have been delivered out of 510 ordered. 90 Standard 12-inch Pipe Overpack Assemblies have been delivered out of 150 ordered. These procurements have committed \$2,591K of accelerated funding. In addition, contract modifications have been negotiated with the OSR Project's off-site source consolidator to provide a greater range of operational capability during the acceleration period. This is expected to require a commitment of approximately \$750K.

- 2) **Approvals:** On March 28, 2003, DOE's Office of Security issued approval of the OSR Project's plan to terminate safeguards requirements on sealed sources containing plutonium-239. This action resolves one of three obstacles to recovering polonium-239 sources.

Concerns:

Plutonium-239: Determining an acceptable management approach for storing plutonium-239 neutron sources at LANL remains an unresolved issue that continues to delay timely recovery. Permission to terminate safeguards requirements for these sources has been resolved. Despite many accomplishments, senior LANL management continues to withhold support for storing plutonium-239 sources at LANL. Specific issues remaining are:

- 1) Approval to dispose all domestic plutonium-239 sources as defense TRU waste at the Waste Isolation Pilot Plant (WIPP) is pending approval at EM.
- 2) Designating an appropriate storage facility for managing accumulated plutonium-239 sealed sources prior to disposal. The OSR Project staff is attempting to resolve this issue with the NNSA Service Center (Albuquerque), Los Alamos Site Office, and LANL management.

Cesium-137: The OSR Project has recently received database registrations of large cesium-137 sources. Disposition for cesium-137 has traditionally been provided by recycling. The current rate of excess and unwanted registrations will exceed recycle opportunities. There currently is no DOE site designated to receive and manage cesium sources.

Strontium-90: Recovery of strontium-90 radioisotope thermal electric generators (RTGs) cannot be initiated until EM designates a receiving site. Strontium-90 RTGs are the number 1 and 2 priorities for recovery.

Out-year Funding: Considerable progress is occurring on recovering sources specified in the NA-241 guidance. However, additional excess sources are registered on the database daily. Many excess sources will undoubtedly remain to be recovered after April 2004. Planned funding from EM for the period after April 2004 will be inadequate for these future needs.

Disposition Path: A need remains for a DOE policy decision on disposal for Greater than Class C waste accumulating at LANL. This includes the thousands of americium-241 and plutonium-238 sealed sources already stored as waste for the OSR Project at LANL's TA-54.

Hazardous waste: Approximately 80 transuranic sealed sources prioritized for recovery contain lithium. LANL and Los Alamos Site Office staff believes receiving these sources would violate LANL's RCRA operating permit. LANL legal staff is reviewing this issue.

Up-Coming Activities:

Large recovery operations at three locations are planned for April 2003. Approximately 640 americium-241 neutron sources will be packaged and transferred to LANL for storage. Additional recoveries from a medical facility, two universities, as well as several commercial sites with less than 10 sources, are planned.

The OSR Project will schedule its first shipment to WIPP for disposal of two drums of plutonium-239 sources in the third quarter of FY 2003. These sources are from decommissioned navy vessels.